

HITACHI

Users Guide

C28W3XTN

C32W3XTN

100Hz
NATURAL SCAN

**PROGRESSIVE
SCAN**

WIDE
SCREEN

Dear HITACHI customer

Congratulations on your purchase of the very latest state of the art technology. At Hitachi we pride ourselves on producing high quality televisions with outstanding picture and audio capabilities, coupled with Hitachi's reputation for superior reliability. You should enjoy many years of trouble free operation from your TV. Take some time to read this Users Guide thoroughly, and if you encounter any difficulty, firstly refer to the Trouble Shooting Guide at the rear of this manual. In the unlikely event of a problem occurring with your TV, contact your dealer immediately.

DOLBY PRO LOGIC SURROUND SOUND*

Dolby Pro Logic Surround Sound is the domestic version of Cinema Dolby stereo sound, and allows the viewer to enjoy full cinematic sound quality when watching films or events recorded in Dolby Surround. The surround channels reinforce the stereo image, allowing front to rear sound movements (such as overhead aircraft effects) which immerses the viewer in ambience and special effects. In addition to this, the Pro Logic circuitry is able to create a centre channel - this anchors dialogue and central sounds to the screen so that speech does not become disembodied or lost in sound effects.

Dolby Pro Logic together with Hitachi's unique 3DS Spatial Sound system will allow you to enjoy the full Cinema Sound in your own home. In addition to this your Hitachi TV has full expansion sockets to accommodate optional speaker systems, so you can set up your listening area to match your most exacting audio demands and aesthetic preferences. These features along with outstanding picture quality and of course our reputation for superior reliability will continually reward your decision for choosing HITACHI.

*Manufactured under license from Dolby Laboratories Licensing Corporation. DOLBY, the double-D symbol  and PRO LOGIC are the trademarks of Dolby Laboratories Licensing Corporation.

...notes on illustrations

The model illustrated throughout this Users Guide is the C28W35TN. This model differs only cosmetically from other models covered by this guide, but all the functions and controls remain the same.

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This television has been designed and manufactured to meet international safety standards, but like any electrical equipment, care must be taken if you are to obtain the best results and safety is to be assured - so please read this users guide before you attempt to install and use this equipment.



DO observe the manufacturer's instructions when connecting extension leads to your TV. The fuse should be a 5 Amp fuse with the safety symbols  and  displayed. If you are in any doubt about the extension installation please consult a competent electrician.



DO consult your dealer if you are in any doubt about installation, operation or safety of your equipment.



DO be careful with any glass panels or doors on equipment.



DO place your TV on a flat surface, or if supplied, the stand accessory.



DO NOT remove any fixed cover as this may expose dangerous voltages.



DO NOT cut off fitted mains plug as it may contain a special radio interference filter, the removal of which could lead to impaired performance. If you wish to extend the lead, obtain an appropriate extension lead or consult your dealer.



DO NOT continue to operate the equipment if you are in any doubt about it working normally or if it is damaged in any way - switch off, take out the wall socket plug and consult your dealer.



IF you intend placing this TV into a cabinet or a wall alcove, please ensure there is at least a 100mm (10cm) gap to the sides, rear and top of the TV. This is to allow for adequate ventilation during your TV's operation.



DO NOT leave unattended equipment switched on unless it is stated that it is designed to do so. Switch off using the switch on the equipment and show your family how to do this. Make special arrangements for infirm and handicapped people.



DO NOT obstruct the ventilation of equipment, for example with curtains or soft furnishings, or place your TV onto a carpet during operation which could also obstruct ventilation. Overheating will cause damage and shorten the lifespan of your equipment.



DO NOT use makeshift stands and never fix legs or stands to the TV with any screws other than those provided - to ensure complete safety always use the manufacturers approved stand with the fixings provided.



DO NOT allow electrical equipment to be exposed to rain or moisture, or place any water filled vessels on top of your TV.

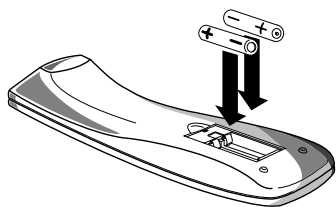


NEVER let anyone, especially children, push anything into holes, slots, or any other opening in the TV - this could result in a fatal shock.



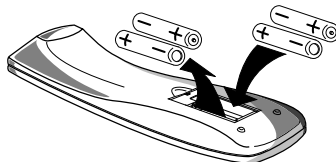
NEVER guess or take chances with electrical equipment of any kind - it is better to be safe than sorry.

always



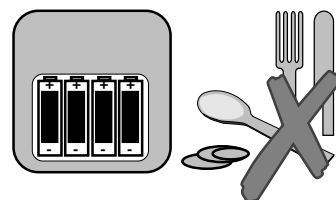
Take care to fit your batteries correctly, observing the plus '+' and minus '-' marks on the battery and appliance. Incorrect fitting can cause leakage, or in extreme cases, fire or explosion.

always



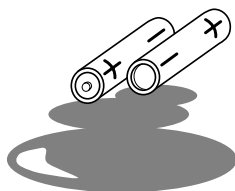
Replace the whole set of batteries at one time, taking care not to mix old and new batteries of different types, since this can result in leakage, or in extreme cases, fire or explosion.

always



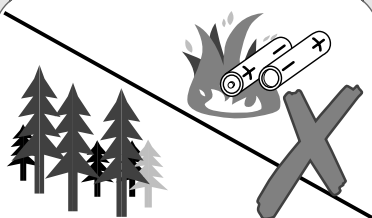
Store unused batteries in their packaging and away from metal objects which may cause a short circuit resulting in leakage, or in extreme cases, fire or explosion.

always



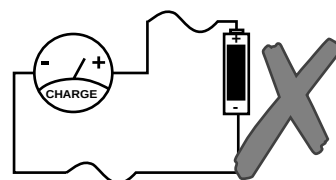
Remove dead batteries from equipment, and all batteries from equipment that is to be left for long periods of time without any use. Otherwise the batteries may leak and cause damage.

never!



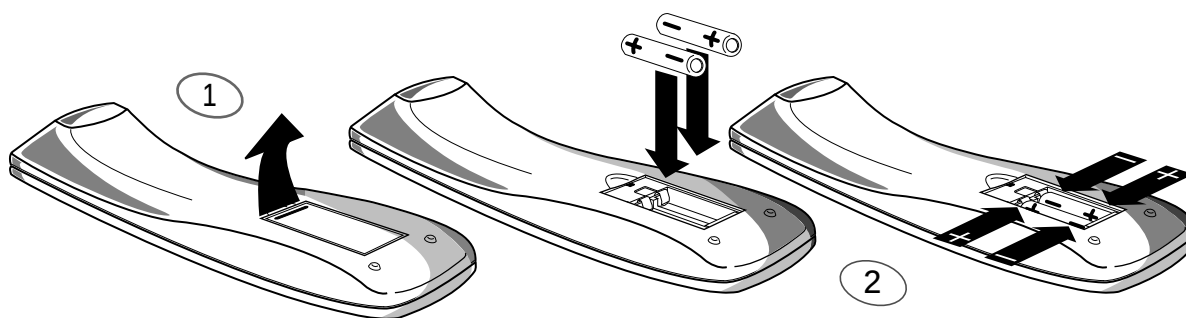
Never dispose of batteries in fire as this can cause an explosion. Respect the environment - always dispose of batteries in an environmentally friendly manner.

never!



Never attempt to recharge ordinary batteries, either in a charger or by applying heat to them. They may leak, cause fire or even explode. Rechargeable NiCAD batteries and chargers can be purchased from any good High Street electrical retailer.

battery installation



1

Remove cover of handset by lifting up the cover at the recess.

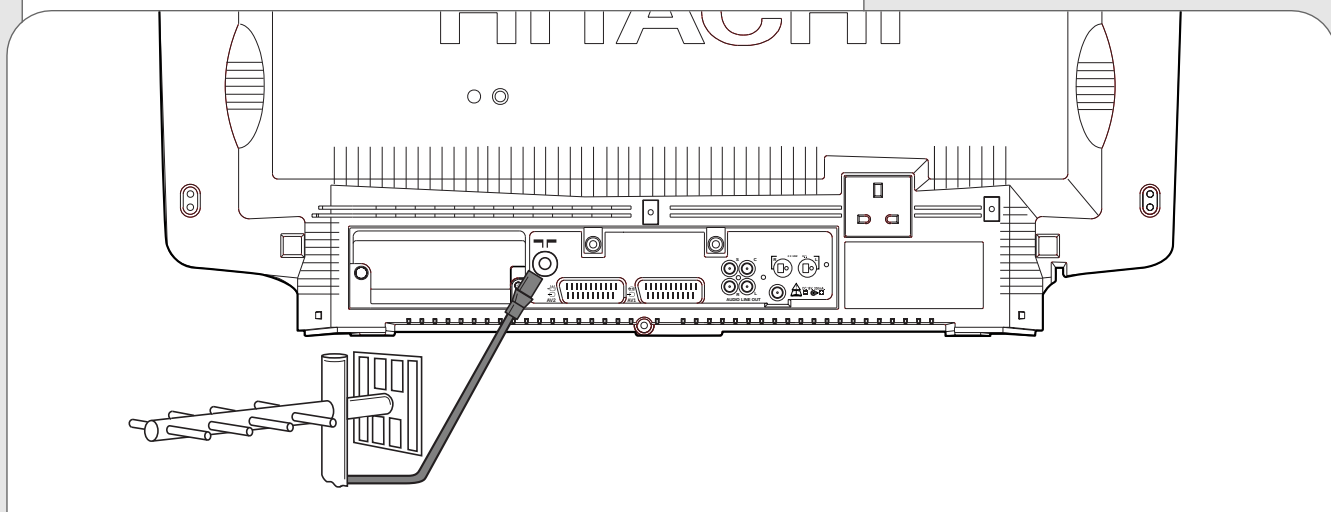
2

Insert batteries into handset as shown and replace cover.



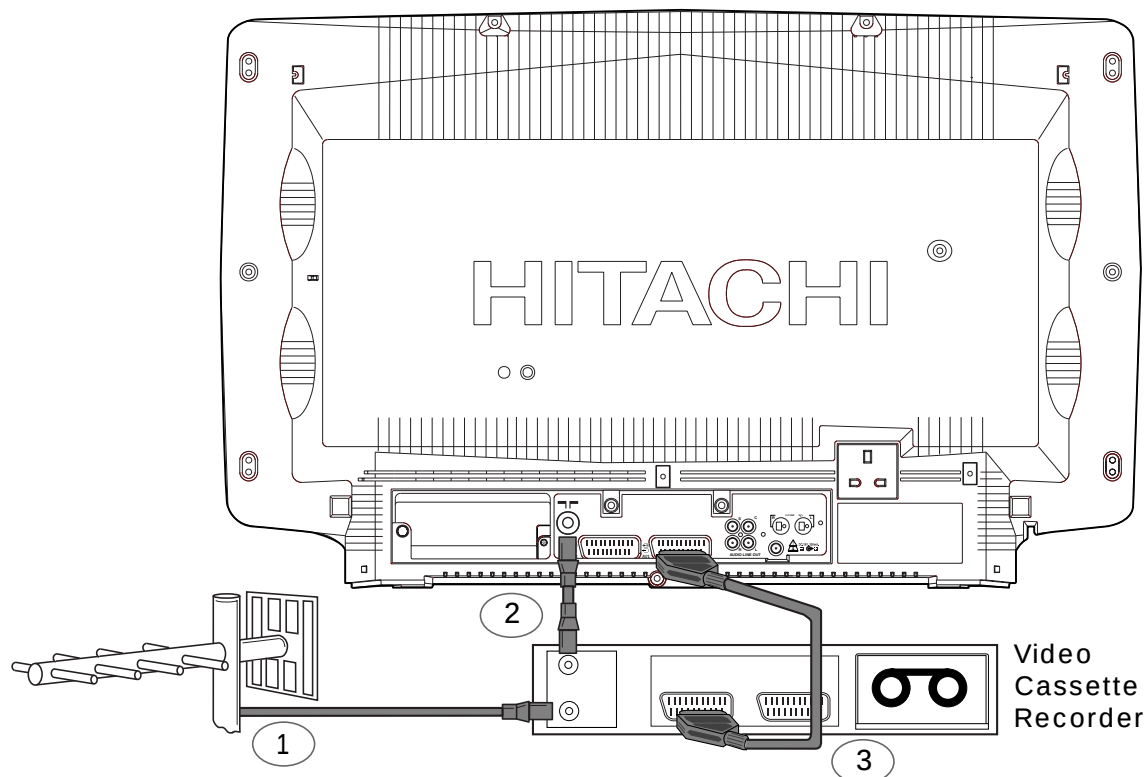
1. When inserting the batteries make sure the polarities are correct, that is, '+' to '+', '-' to '-'.
2. Replace the batteries with the equivalent 'AAA' type.
3. Discard old batteries safely, following the battery safety guidelines.

aerial connection



- 1 Connect aerial (RF) lead to television RF 'in' socket marked 

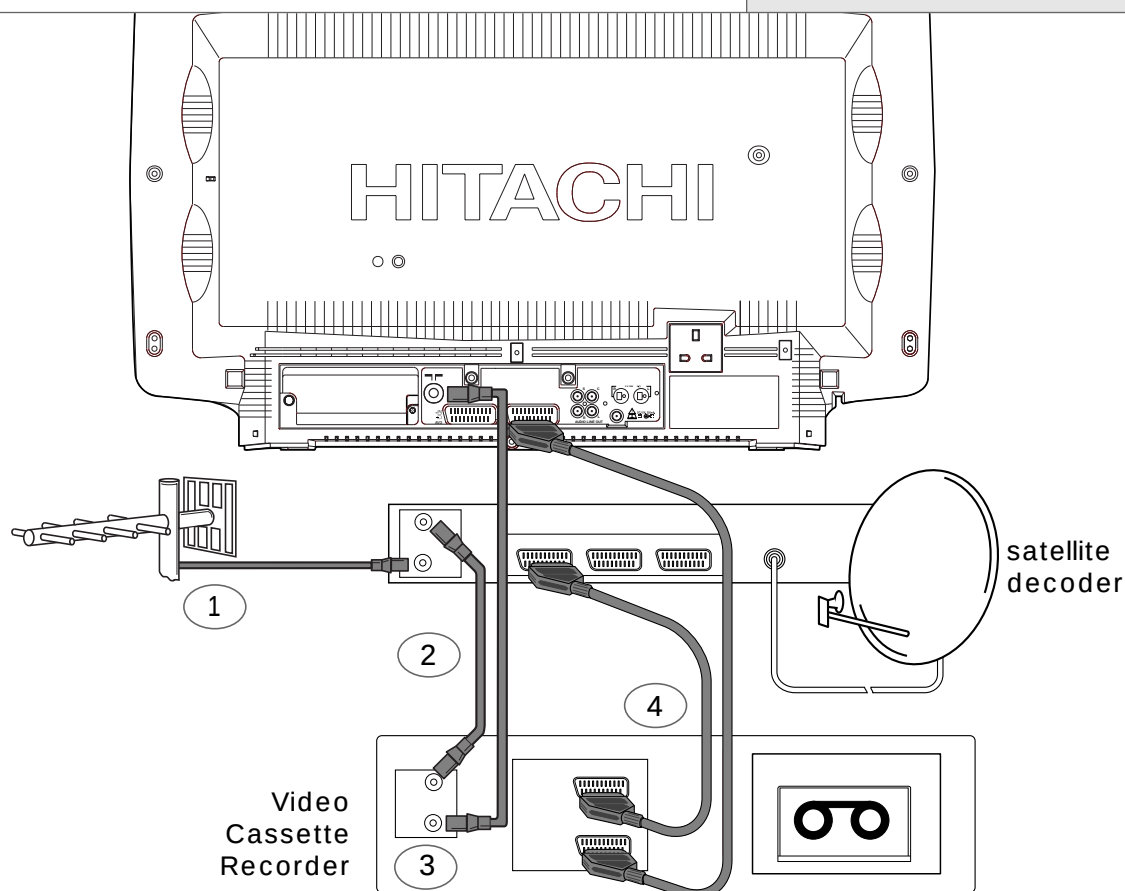
aerial and VCR connection



IMPORTANT NOTE. When you connect your VCR to your television, the Audio Visual value has to be set correctly to ensure best picture quality - see AV set up on page 31

- 1 Connect aerial (RF) lead to VCR RF 'in'.
- 2 Connect VCR 'out' to your television's RF socket 'in' marked  with supplied lead.
- 3 Scart leads are an optional extra*

satellite and VCR installation



1

Connect aerial (RF) lead to satellite RF 'in'.

2

Connect satellite 'out' to VCR RF 'in'.

3

Connect VCR 'out' to TV 'in' marked  with supplied lead.

4

Scart leads are an optional extra*

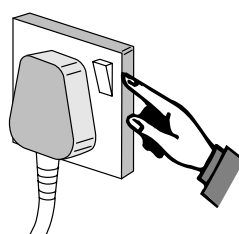
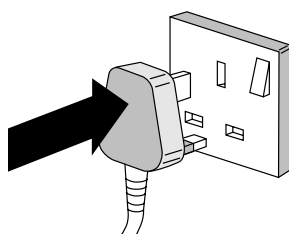
*A scart lead should be fitted between your TV and VCR to enhance your picture and sound quality. Scart leads are essential if you have a stereo TV and VCR and wish to obtain stereo sound from your equipment. These leads can be purchased from your Hitachi dealer or any good High Street electrical retailer.

VHS video equipment should be connected to the AV1 scart socket located at the rear of your TV. A dedicated program number may be assigned to AV1, allowing you easier access to view external equipment broadcasts. How to assign an AV signal to dedicated program numbers is explained on page 25.

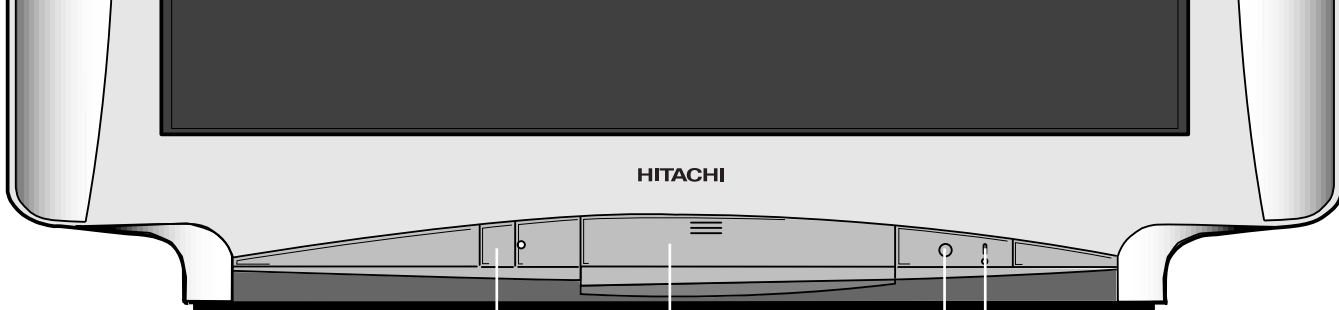
connecting to the mains socket

Important - If you have not already done so, please read television safety on page 4 before connecting your television and external equipment.

insert plug...



...and switch on



on/off button

Use this to switch your TV on and off.(when switched off using this button your TV consumes no power - unlike when in standby mode).

Please Note: When switching your TV off, a circle of colour maybe viewed briefly on your TV screen. This is not a fault but an indication that the software and components of your TV are shutting down.

TV mode light

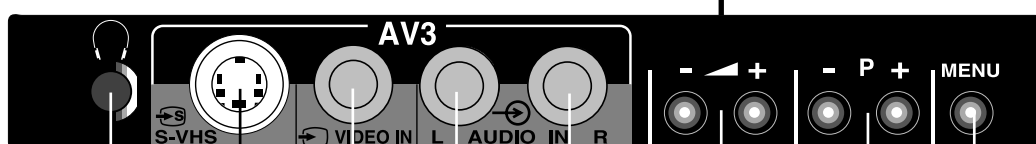
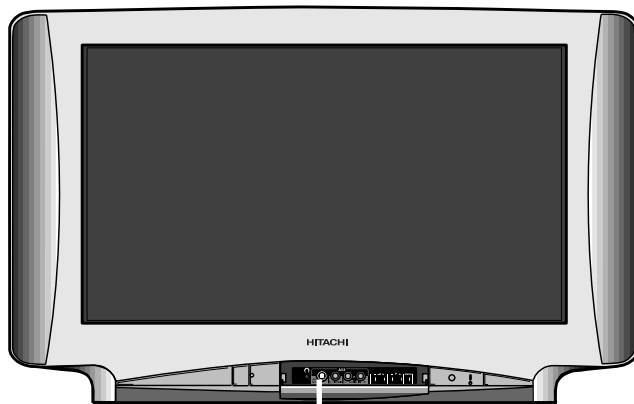
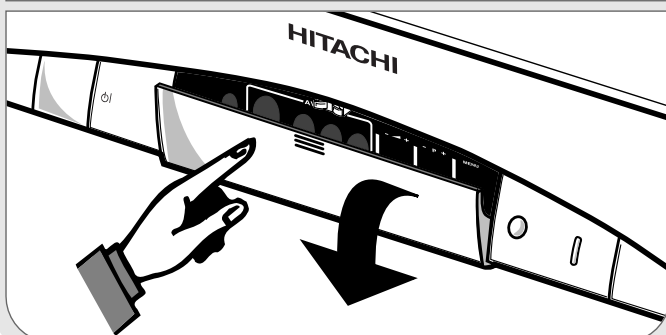
This will be lit when your TV is on and when in standby mode, and flash when a function from your remote control is being sent to the TV.

infra-red lens

This is for reading commands sent from your remote control handset.

television controls door panel

To use the controls push the door in and release.



headphone socket

Used with headphones (3.5mm stereo jack plug required).

S-VHS sockets

This socket is for use with external equipment - see page 9.

audio/video sockets

These sockets are for use with external equipment - see page 9.

volume buttons

Used to increase '+', or decrease '-' your TV's sound (or cursor right and left when in On Screen Display menus).

program buttons

Used to change the TV channel up '+' or down '-' (or cursor up and down when in On Screen Display menus).

menu button

Used to access your on screen MAIN MENU for TV features adjustment.

camcorder

Connecting a camcorder to your TV is easy. First, identify the type of camcorder and its connecting sockets. If it is a standard 8mm type camera then this is likely to have 'RCA' type sockets. If you have a S-VHS or Hi8 camera you may have a S-VHS socket. Open the front control panel door and connect your equipment as detailed here. Switch your TV on and press the TV/AV button  on your handset until AV3 is displayed on your TV screen. Now begin playback operation of your equipment. Alternatively, you could allocate an individual channel number for your camcorder equipment - see signal source entry on page 25.



Before connecting external equipment, please consult AV setup on page 31.

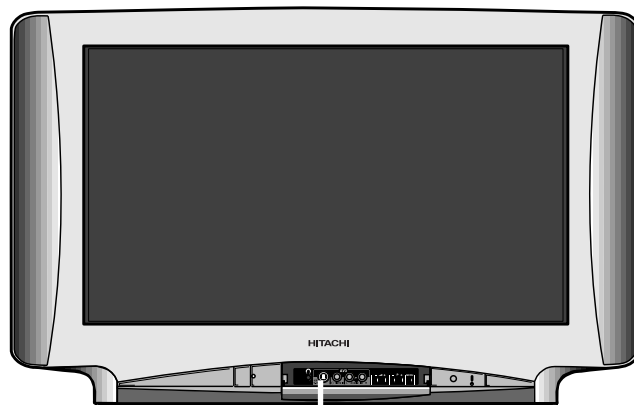
headphone connection

To use headphones with your TV insert the headphone jack plug (3.5mm) into the corresponding socket.

(see sound mode on page 19)

S-VHS socket

Use this socket with an S-VHS or Hi8 camera to view your recordings.



audio in right

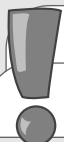
Use this socket, along with audio in left to obtain sound from your external equipment through your TV's speakers.

audio in left

Use this socket, along with audio in right to obtain sound from your external equipment through your TV's speakers.

video in

Use this in conjunction with a standard 8mm camera to see the picture from your equipment.

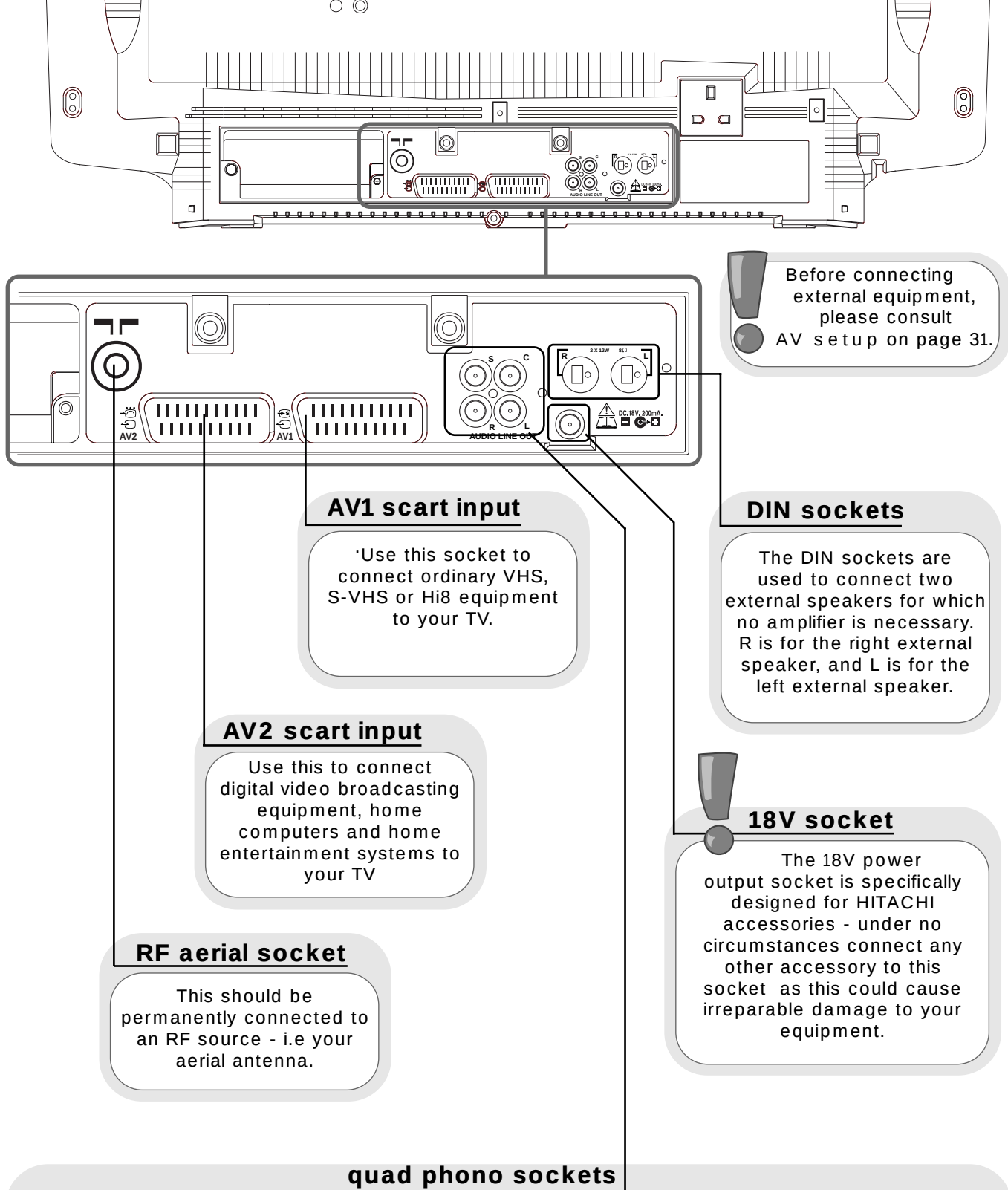


connecting to the mains socket

Important - Please read television safety on page 4 before connecting your television and external equipment.

If digital video broadcasting equipment, computer equipment or video games are to be connected to this TV, use the AV2 located on the rear of your TV for RGB input.

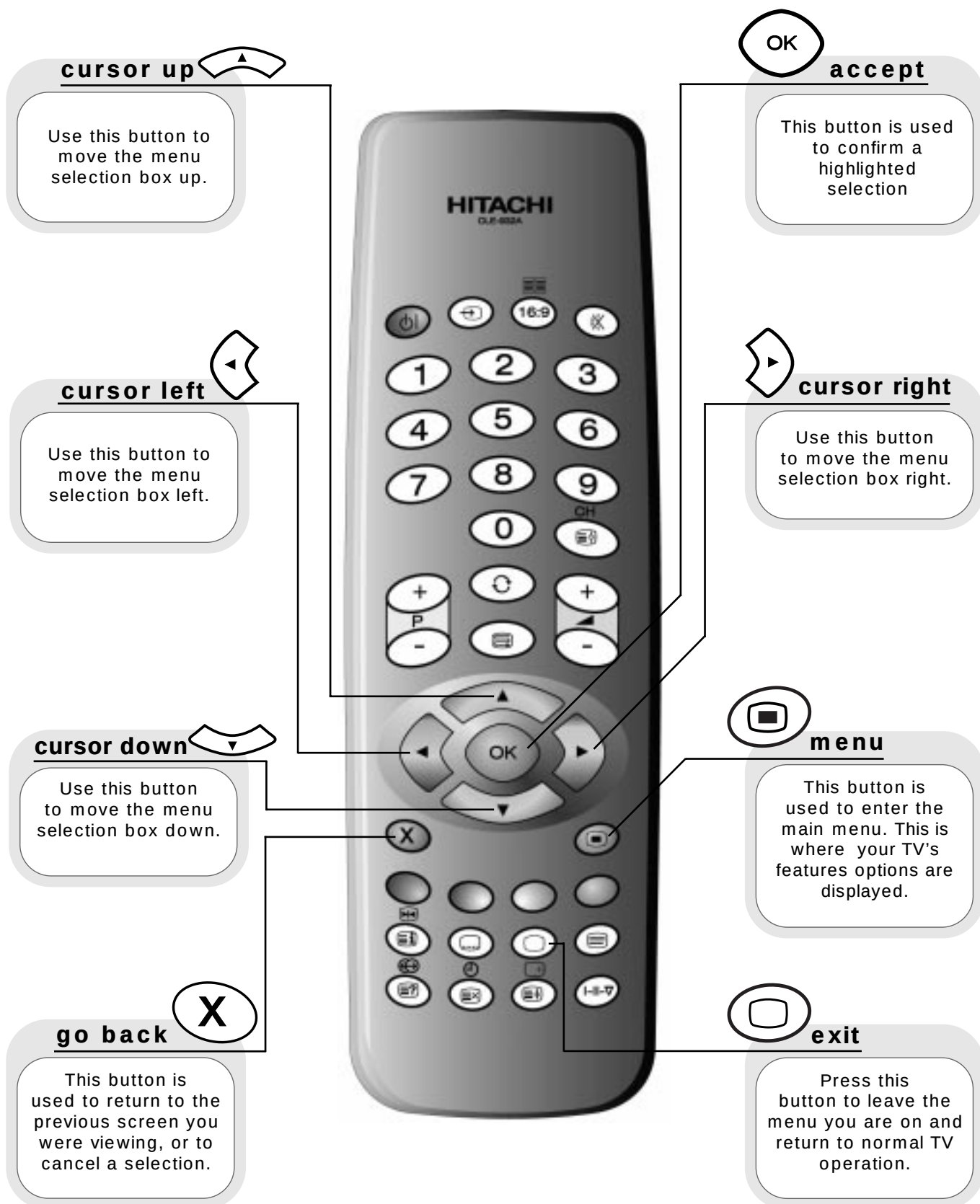
PLEASE NOTE: Prolonged use of computer equipment or games on this TV may cause permanent damage to your picture tube. To avoid such damage, reduce the brightness and contrast to an acceptable level and limit the duration of use of computer equipment.



...notes on audio equipment

If you have purchased your TV complete with Hitachi's power console please refer to the Users Guide that is supplied with the equipment.
Your HITACHI dealer can also advise you on the correct amplifier and speaker choice for your TV.

The handset controls shown below are used when programming your TV and to adjust the sound and picture features.



For other handset controls see
handset controls - teletext functions on page 32
handset controls - television operation on page 34

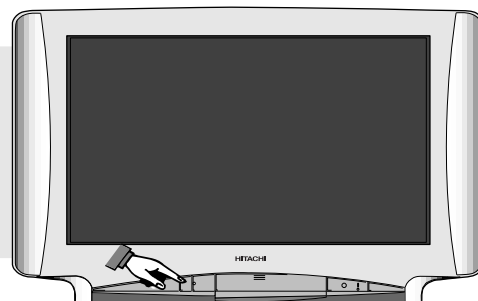


important note on VCR and satellite

Do not switch your TV on until all external equipment is connected. If you have a Video Cassette Recorder or a Satellite receiver connected to this TV please ensure that they are switched on before automatic tuning begins. In the case of a VCR, insert a pre-recorded tape and begin playback of your equipment. With a Satellite receiver select Sky News. These measures ensure that all your external equipment is tuned in during the autotune procedure.

1

To make your program tuning easier, HITACHI have installed an automatic tuning procedure to find the programs. Switch your TV on.



2

If you are satisfied all external equipment has been connected, press the OK button on your handset and AUTOTUNE will begin.

OK



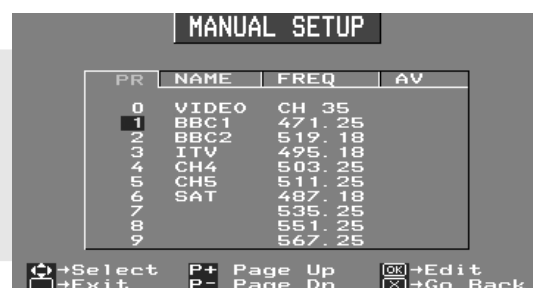
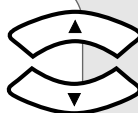
3

Your TV will now search through the frequencies, listing them in into the following order - 1.BBC1, 2.BBC2, 3.ITV 4.CH4/S4C, 5.CH5 (subject to availability) 6.Satellite.



4

By using the up and down buttons you can view all the programs found and stored during AUTOTUNE.



8

To finish the installation process and return to normal TV operation press the menu button on your handset twice.



1

Press and hold the MENU button for 5 seconds. The INSTALL option in the MAIN MENU appears.



2

Press the cursor down button to select INSTALL.



3

Once highlighted, accept selection.



4

Press the cursor down button to select MANUAL SETUP.



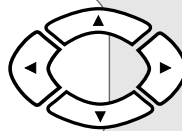
5

Once highlighted, accept selection



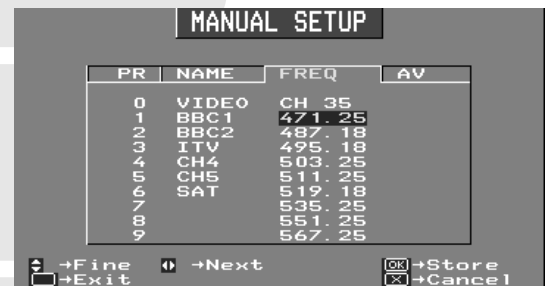
6

Use the cursor keys to move the selection bar over the program FREQUENCY required to be adjusted.



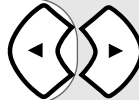
7

Once highlighted, accept the selection to change the frequency and you will see the selection bar turn red - it is ready to be changed.



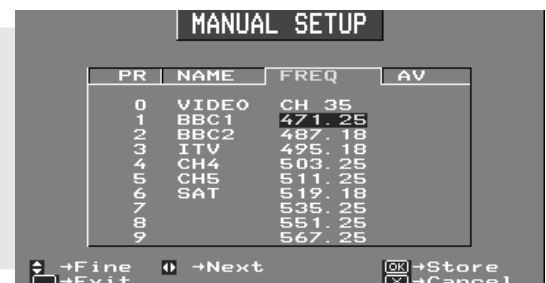
8

Select your choice of FREQUENCY entry method using the left/right cursor keys.



entry method 1

The first option will be to fine tune the chosen frequency either up or down.



entry method 2

If the right cursor key  is pressed, autosearch becomes an option - you can search either up or down.

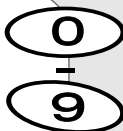


MANUAL SETUP			
PR	NAME	FREQ	AV
0	VIDEO	CH 35	
1	BBC1	471.25	
2	BBC2	487.18	
3	ITV	495.18	
4	CH4	503.25	
5	CH5	511.25	
6	SAT	519.18	
7		535.25	
8		551.25	
9		567.25	

☐ →Search ☐ →Next ☐ →Store
☐ →Exit ☐ →Cancel

entry method 3

If the right cursor key  is pressed again, you can enter a two digit channel number (CH) using the buttons 0-9.

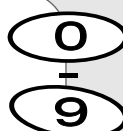


MANUAL SETUP			
PR	NAME	FREQ	AV
0	VIDEO	CH 35	
1	BBC1	CH --	
2	BBC2	487.18	
3	ITV	495.18	
4	CH4	503.25	
5	CH5	511.25	
6	SAT	519.18	
7		535.25	
8		551.25	
9		567.25	

0-9 Input ☐ →Next ☐ →Store
☐ →Exit ☐ →Cancel

entry method 4

If the right cursor key  is pressed again, you can enter a two digit S-Band number using the buttons 0-9.

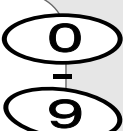


MANUAL SETUP			
PR	NAME	FREQ	AV
0	VIDEO	CH 35	
1	BBC1	S --	
2	BBC2	487.18	
3	ITV	495.18	
4	CH4	503.25	
5	CH5	511.25	
6	SAT	519.18	
7		535.25	
8		551.25	
9		567.25	

0-9 Input ☐ →Next ☐ →Store
☐ →Exit ☐ →Cancel

entry method 5

If the right cursor key  is pressed again, you can manually input a five digit frequency using the numbered handset buttons.



MANUAL SETUP			
PR	NAME	FREQ	AV
0	VIDEO	CH 35	
1	BBC1	---	
2	BBC2	487.18	
3	ITV	495.18	
4	CH4	503.25	
5	CH5	511.25	
6	SAT	519.18	
7		535.25	
8		551.25	
9		567.25	

0-9 Input ☐ →Next ☐ →Store
☐ →Exit ☐ →Cancel

9

Once the method of entry has been decided upon and the new frequency or channel entered, this can then be stored in the TV's memory by pressing the confirmation button.

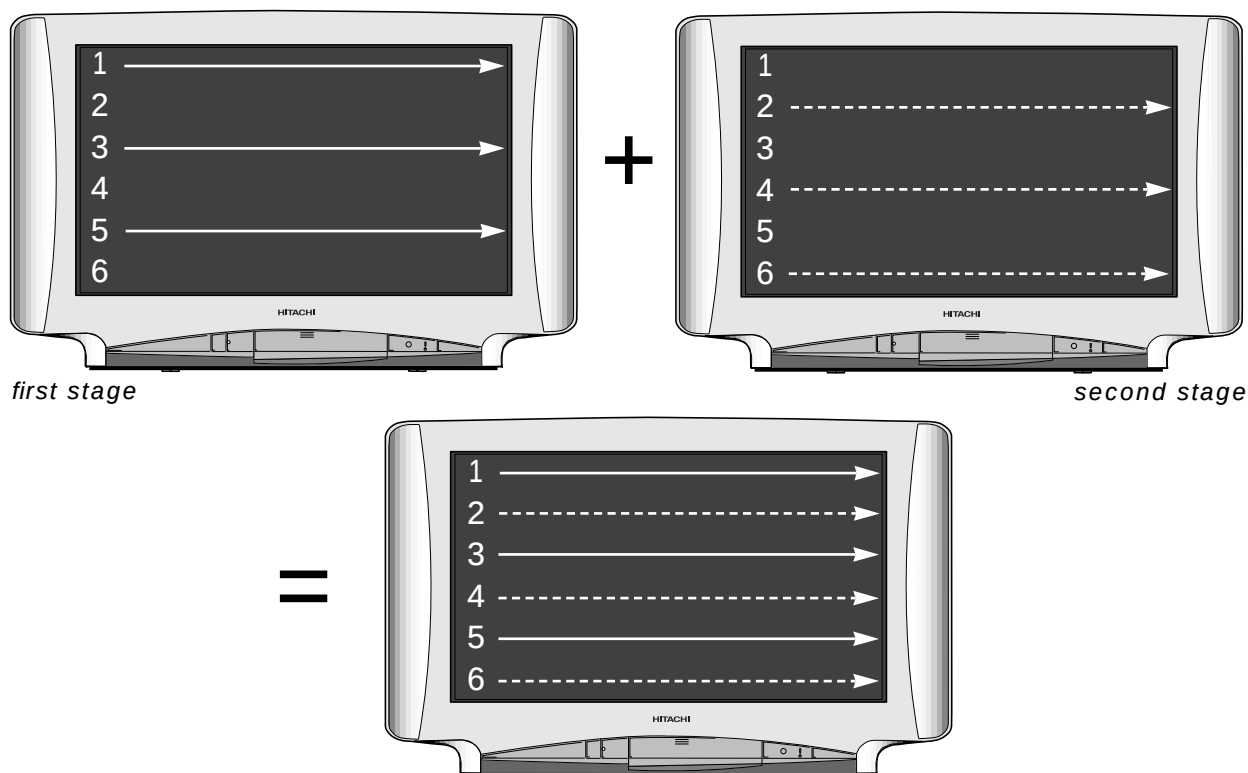
OK

10

To return to normal TV operation press the television button on your handset.



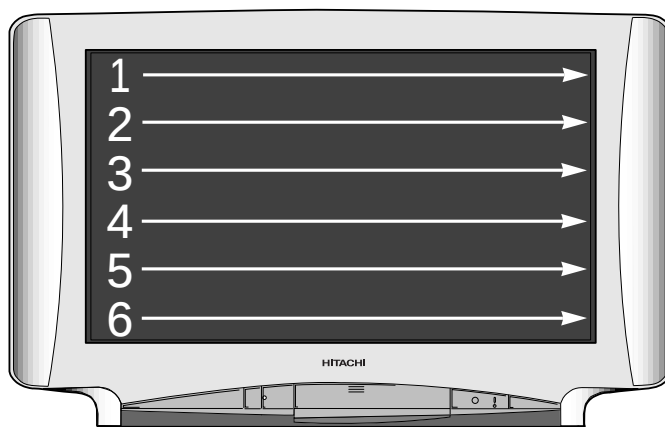
standard 50Hz picture



In a standard 50Hz television the picture is created in two separate stages. For example, scan lines 1, 3, and 5 etc. are filled in first. Once this stage is complete scan lines 2, 4, and 6 etc. are filled. This means that after these two stages all the lines on your television screen have been filled (625 in total) resulting in a complete frame. This process is then repeated creating the picture you see on the screen of a conventional TV.

Note: a standard 50Hz picture is not available on your model

Progressive Scan



Hitachi's Progressive Scan TV's are constantly thinking ahead, filling in all the 625 scan lines in one go to make up a complete frame. This progressive addition of extra line information produces a picture that is brighter, more detailed than conventional televisions and displays the picture without the line 'flicker' often associated with 50Hz sets.

100Hz Natural Scan

Our 100Hz TV's create double the number of images per second, compared to a conventional 50Hz set. This delivers sharper, clearer, more stable total pictures which are flicker free. Our 100Hz sets also feature "Natural Scan" technology. This process eliminates the slight trembling of lines on the picture that is visible on conventional TV sets giving a rock steady picture which is clear and detailed.

To switch between Progressive Scan and 100Hz press the  button on your handset.



For picture and sound values, moving the cursor **left will decrease** values, whilst moving the cursor **right will increase** values.

1

Press the MENU button to obtain MAIN MENU.



2

The MAIN MENU highlights the PICTURE option automatically - press OK to select.



3

Select the picture control to be adjusted by using the up / down cursor buttons.



4

Once highlighted, adjust the chosen controls by pressing the right / left cursor buttons.



5

To select MORE options use the up/down buttons to highlight selection and then press OK to confirm.



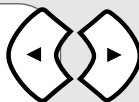
6

Select the picture control to be adjusted by using the up/down cursor buttons.



7

Once highlighted, adjust the chosen controls by pressing the right/left cursor buttons (for explanation see below)



8

The values changed will remain until they are next altered. Press the TV button on your handset to return to normal TV operation.



Noise Reduction

Helps reduce the noise interference visible on your television, especially in weaker signal reception areas.

Comb Filter

This control lets you remove 'swirling' cross colour when your picture contains close or small check patterns.

CTI

Colour Transient Improvement - This control lets you improve the clarity of your televisions colour edges.

White Point

NORMAL - gives an equally balanced spectrum of colour.
COOL - exaggerates the blue tones of your television picture.
WARM - this exaggerates the red tones of your television picture.

VM

Velocity Modulator - this increases or decreases the sharpness of your televisions picture so it appears less blurred especially in left and right edges of the screen.

Black Stretch

This control turns all dark grey pixels black.

1

Press the MENU button to obtain MAIN MENU.



2

Press the cursor down button to select AUDIO.



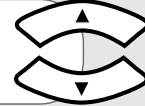
3

Once highlighted, accept selection.



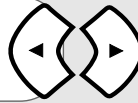
4

Select the control to be adjusted by using the up/down cursor buttons.



5

Once highlighted, adjust the chosen controls by pressing the right/left cursor buttons.



volume control

This control is used to increase, or decrease the sound from your TV's speakers.

balance

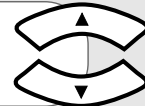
Only available when in 'hall' or 'stereo' sound mode. This control is used to increase or decrease the sound volume from your right and left speakers.

loudness on/off control

When listening to your TV at a low volume switch this control ON to compensate for the lack of low and high frequencies.

6

You can view the EQUALISER screen by selecting 'MORE' using the up/down cursor buttons.



7

Once highlighted, accept selection.



equaliser

The EQUALISER menu is used to adjust the tonal ranges of your TV's sound.

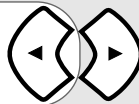
8

Select the mode or sound frequency to be adjusted by using the up/down cursor buttons.



9

Once highlighted, adjust the chosen controls by pressing the right/left cursor buttons.



mode

You have a choice of 3 individual 'modes' which can be adjusted to suit personal needs. Set a complete range value (detailed below) and your TV will remember the settings in the appropriate mode number.

120Hz bass range

This range controls the bass sound from your television - if the bass sound from your TV is too 'boomy' turn this control down.

500Hz mid bass range

This range is the basis of your sound - if your television's sound is too rich, or not rich enough, adjust this control to enhance the TV's sound.

1.5kHz mid range

Use this control to adjust the mid-range voice area of your TV's sound.

5kHz mid high range

When this control is increased it emphasises the flute and string instruments of your TV's sound - when decreased it has a soothing effect on the sound.

10kHz high range

The sharp sound of triangles and cymbals are emphasised if this control is increased.

10

To return to normal TV operation press the television button on your handset.



1

Press the MENU button to obtain MAIN MENU.



2

Press the cursor down button to select SOUND MODE.



3

Once highlighted, accept selection.



4

Use up/down cursor buttons to select your choice of sound mode.



5

Once highlighted, accept selection - when you turn your TV off, by default this will be the sound mode when it is switched back on.



Dolby Pro Logic

In this mode virtual surround sound can be created using just the TV's internal speakers. Activate 3DS to enable virtual surround sound. This mode is also particularly suitable for films and programmes that display the Dolby Pro Logic caption. This mode is recommended for the majority of your TV viewing.

Dolby Pro Logic Theatre

This mode creates a larger sound field for those programmes that have little surround sound content. It is particularly effective when used in conjunction with external surround amplifiers. However, if you are using the TV internal speakers only, activating the 3DS system will also provide a pleasing spatial sound.

hall

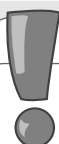
The hall mode creates an ambient sound effect, especially when viewing mono broadcasts. Again, this mode is very effective when used in conjunction with external surround amplifiers. Activate the 3DS mode whilst using the TV's internal speakers to obtain equally pleasing sound from your TV.

stereo

When stereo mode is selected, your TV produces high quality stereo sound. Select this mode when viewing general TV programs and films (3DS sound can be activated in this mode to provide a much wider stereo image).

headphone mode

When using headphones, this will give a more natural sound when highlighted.
When used in 3DS mode the sound quality will be greatly improved.



important note

1. Dolby Pro Logic can only be achieved by the addition of an external surround sound amplifier and speaker system. These are available from your HITACHI dealer.
2. Activating 3DS whilst using external surround amplifiers will cause the external surround channels to mute.
3. Activating and deactivating 3DS can only be achieved whilst no menus are displayed on-screen.

6

To return to normal TV operation press the television button on your handset.



1

Press the MENU button to obtain MAIN MENU.



2

Press the cursor down button to select FEATURES.



3

Once highlighted, accept selection.



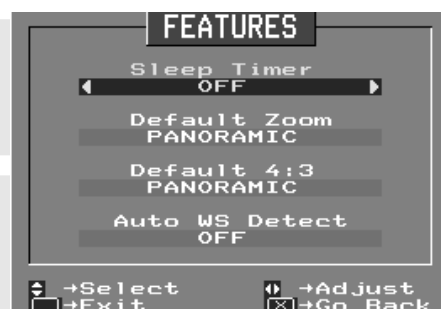
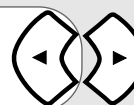
4

Use up/down cursor buttons to select option to adjust.



5

Use right/left buttons to adjust chosen feature.



6

Once highlighted, accept selection - when you turn your TV off, and the TV will memorise your adjustments



...notes on Sleep Timer

This feature is used to automatically place your TV into standby mode after a set number of minutes - use the right/left cursor buttons to set the timer between 5 and 120 minutes. When the timer has only a minute left this will be shown on the screen as a countdown from 59 seconds to zero, after which your TV's status will be standby.

...notes on Default Zoom and Default 4:3

Various broadcast stations now transmit WSS (Wide Screen Signals) which identifies the picture format movies and programs are broadcast in.

Built into your TV is software that detects these WSS and automatically switches your TV to the correct format. However, some broadcasters do not transmit this WSS, and so your TV will not recognise which format is being transmitted. Therefore, DEFAULT ZOOM is used to choose your picture requirements when a Wide Screen Signal has not been sent or has not been detected - these choices are explained on the next page.

The DEFAULT 4:3 acts in the same manner, but only looks for a 4:3 WSS. If this is detected your TV's picture format will be in accordance with the setting in the DEFAULT 4:3 option.

...notes Auto WS Detect

Auto Wide Screen Detect, when switched ON (and there is no WSS signal) enables your TV's software to look for the black bands at the top and bottom of the picture received (see C16:9L format, page 22) and displays your picture in the format it is received in.

If this is set to 'OFF', these black bands cannot be detected. Therefore the picture format will revert to the setting specified in the DEFAULT ZOOM option if there is no WSS signal.

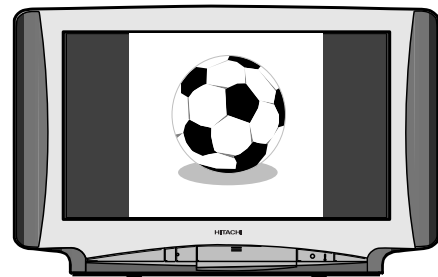
...notes on wide screen features

Various broadcast stations now transmit movies and programs in true wide screen format.

Built into your TV is software that detects these signals and automatically switches your TV to the correct format. However, some broadcasters do not transmit this automatic sensing signal, and so your TV will not recognise which format is being transmitted. This situation can be overcome by simply pressing the **16:9** key on your handset.

auto format

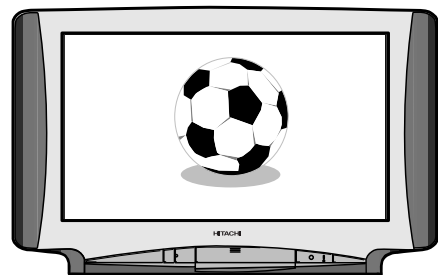
Auto mode automatically detects various screen formats that are transmitted in either conventional (4:3) or wide screen (16:9 or 14:9) format. After detecting which signal is being transmitted the TV will automatically switch to the correct screen ratio. In example 1 (right) a 4:3 conventional picture format is shown - note the black bars to the sides of the screen - this is consistent with screen compression. Note: Hitachi recommend AUTO is selected for the majority of TV viewing.



16:9 format

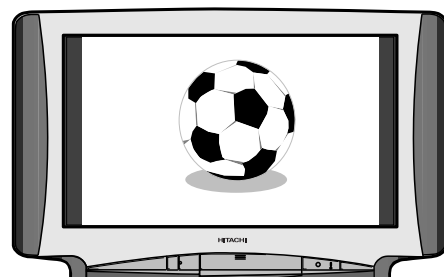
The picture (right) illustrates a true 16:9 wide screen picture format. This type of picture fills the entire TV screen.

The 16:9 mode can also be manually selected if desired by pressing the **16:9** button on your handset.



14:9 format

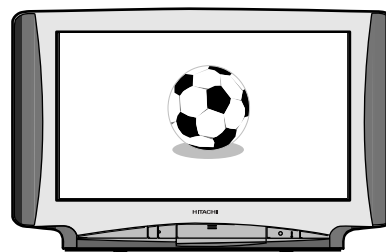
The 14:9 format (right) is the medium between the 4:3 and 16:9 ratio signals. When this mode is selected thin black bars appear to the sides of the screen.



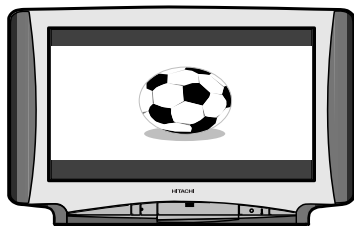
panoramic format

The panoramic mode emulates that of a wide screen broadcast for 4:3 transmissions. This is achieved by maintaining the proportions of the centre of the screen while shrinking the images on the top and bottom of the screen.

Note: This mode is generally recommended if AUTO is not selected

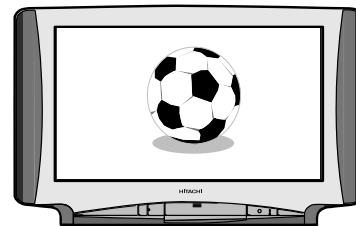


C16:9L format



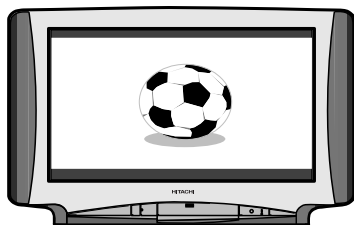
before

The 16:9 ratio is the format that is usually transmitted by the broadcasting stations. The C16:9L format is used to expand a 16:9 'letter box' broadcast so that it uses the full screen to display the picture so that the image does not appear 'crushed'.



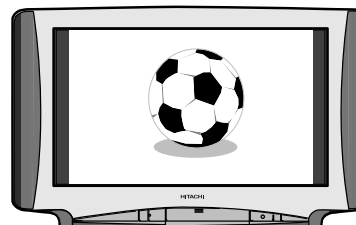
after

C14:9L format



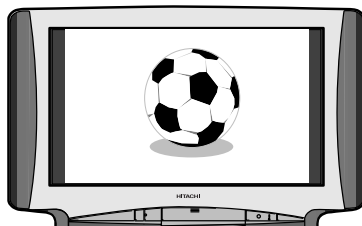
before

The 14:9 ratio is the format that is sometimes transmitted by the broadcasting stations. The C14:9L format is used to expand a 14:9 broadcast so that it produces an image of true proportions, but because of the original ratio the screen will have thin black bars to the right and to the left of the picture.



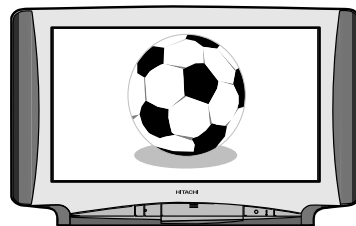
after

C14:9LS format



before

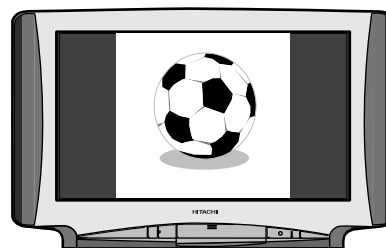
Some broadcasters transmit in a 14:9 format, which appears with black bands down each side of your picture. C14:9LS enlarges the picture (which can cut off the top) so these black bars are no longer visible.



after

4:3 format

The conventional picture format for most broadcasts is the 4:3 ratio signal which gives black bars to the sides of the screen and this is consistent with screen compression (see right).



1

Press and hold the MENU button for 5 seconds. The INSTALL option in the MAIN MENU appears.



2

Press the cursor down button to select INSTALL.



3

Once highlighted, accept selection.



4

Press the cursor down button to select MANUAL SETUP.



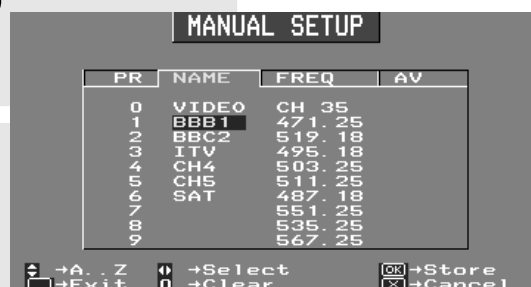
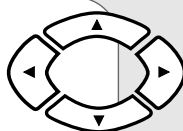
5

Once highlighted, accept selection.



6

Use the cursor keys to move the selection bar over the NAME required to be adjusted.



7

Once highlighted, accept the selection to change the name and you will see the selection bar turn red and the chosen character will flash on and off - it is ready to be changed.
Note: Pressing the '0' button will clear all the characters of the chosen name.



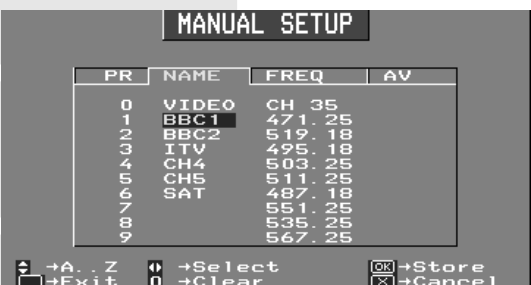
8

You can input up to 5 characters - to **change** each character use the up/down cursor buttons.



9

To **move** from character to character use the right/left cursor buttons.



10

Once the new NAME has been chosen and entered, confirm your entry to be stored and repeat if necessary.



11

To return to normal TV operation press the television button on your handset.





It is advisable to organise your viewing channels at this point - the next section (signal source entry) allows you to give individual channels their own signal source for external equipment connection such as camcorders, games machines etc.

1

Press and hold the MENU button for 5 seconds. The INSTALL option in the MAIN MENU appears.



2

Press the cursor down button to select INSTALL.



3

Once highlighted, accept selection.



4

Press the cursor down button to select MANUAL SETUP.



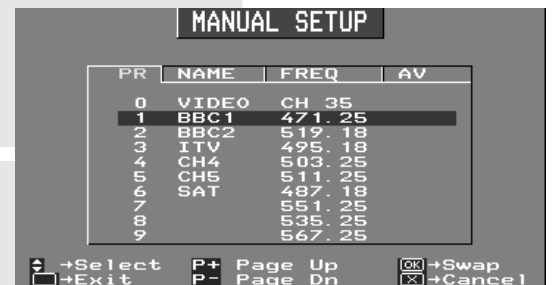
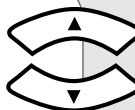
5

Once highlighted, accept selection.



6

Select your **first** program to swap by moving the selection bar using the up/down cursor buttons over a channels PR number.



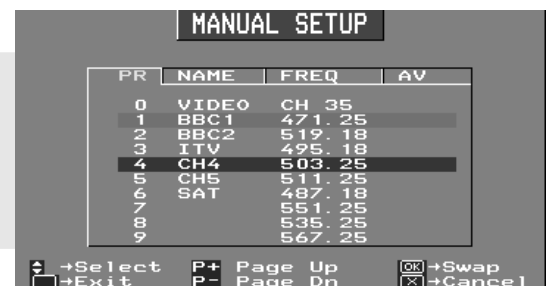
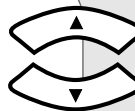
7

Once highlighted, accept the selection and you will see the selection bar turn red - it is ready to be swapped.



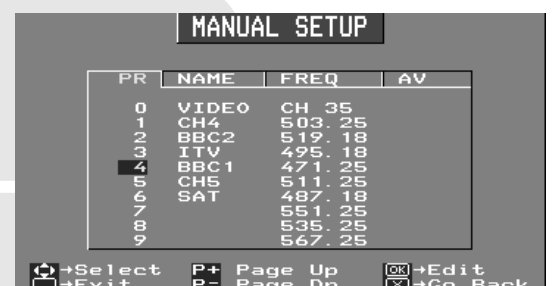
8

Select your **second** program to swap by moving the selection bar using the up/down cursor buttons.



9

Once this has been done, accept selection and the two chosen programs will swap position - repeat if necessary.



10

To return to normal TV operation press the television button on your handset.



...notes on signal source entry

Each piece of external equipment connected to your TV must have its own input socket. It would also be easier, and more organised, if the external equipment connected also had its own channel number. *Signal Source entry allows us to tell the allocated channel what equipment is connected to which socket.* This would make the switching between normal operation and the connected equipment much smoother.

For example, if you want to connect a games machine to your TV -

1. connect to socket AV2 via a scart lead (see page 10).
2. give your games machine an empty channel number of its own.
3. if desired change this channel name (see page 23).
4. give this channel the correct AV signal source (in this case AV2 - option 2, page 26).

1

Press and hold the MENU button for 5 seconds. The INSTALL option in the MAIN MENU appears.



2

Press the cursor down button to select INSTALL.



3

Once highlighted, accept selection.



4

Press the cursor down button to select MANUAL SETUP.



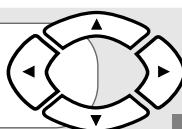
5

Once highlighted, accept selection.



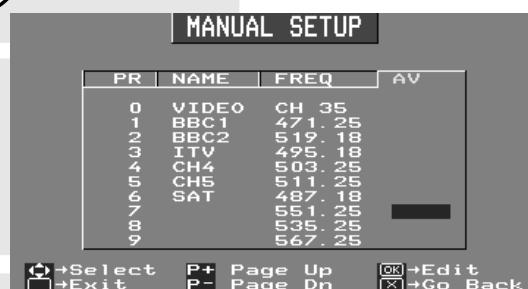
6

Use the cursor keys to move the selection bar over the AV required to be adjusted.



7

Once highlighted, accept the selection to change the frequency and you will see the selection bar turn red - it is ready to be changed.



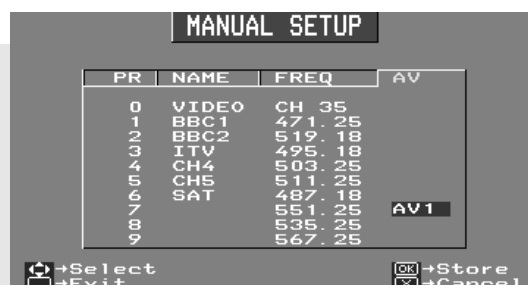
8

Select your method of signal source entry using the up/down cursor buttons.



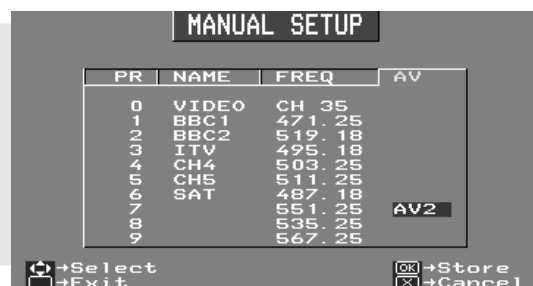
option 1

AV1 is the signal source used when connecting external equipment (eg. VCR) through a scart lead to the AV1 socket at the rear of your TV.



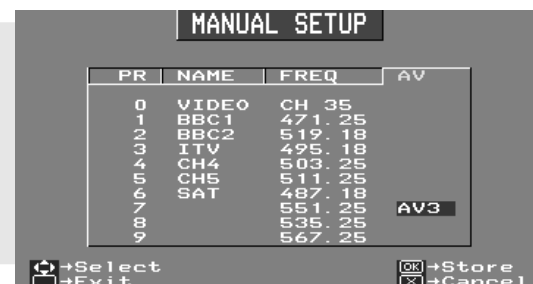
option 2

AV2 is the signal source used when connecting external equipment such as home entertainment systems and satellite decoders through a scart lead to the AV2 socket at the rear of your TV.



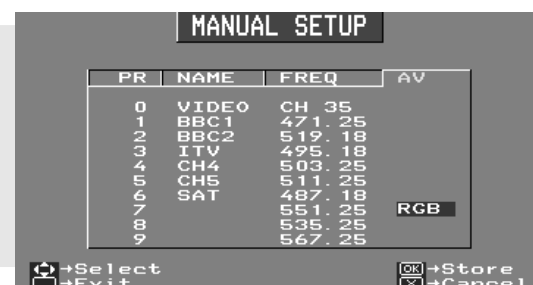
option 3

AV3 is the signal source used when connecting temporary equipment like a camcorder to your TV through the audio/video sockets at the front of your TV.



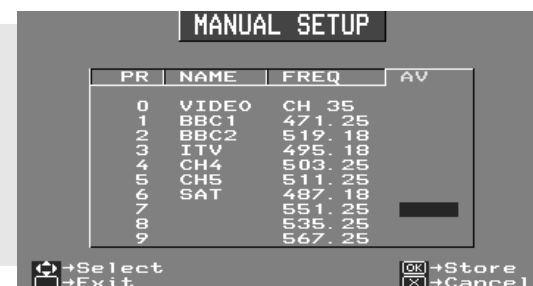
option 4

RGB is the signal source used when connecting digital video broadcasting equipment or home entertainment systems to your TV through the AV2 scart lead at the rear of your TV.



...notes on RF signal source

RF is the signal source used for standard television broadcasting and this should be used as the setting for programs BBC1, BBC2, ITV, CH4/S4C, and CH5 (where available). This source appears blank.



9

Once the signal source for each relevant program number has been decided, this can be stored in your TV's memory by pressing the conformation button.

OK

10

To return to normal TV operation press the television button on your handset.



...notes on surround setup

At Hitachi we appreciate the fact that not all living areas are the same, therefore the surround setup menu allows the user to balance the sound by adjusting the volume level to each channel, thus accommodating various room layouts. Please note that the surround setup menu is only available in Dolby Pro Logic and Dolby Pro Logic Theatre modes and so the TV will automatically default to Dolby Pro Logic when selected. NOTE: When the surround setup menu begins, the TV's sound is replaced by a noise signal. This is easier to balance than normal TV sound, and will cycle between the centre, left, right and surround channels - the centre channel cannot be adjusted unless an external amplifier for the centre channel is connected and is adjusted from PHANTOM to WIDE or NORMAL modes in the 'Speaker Setup' menu.

When the TV automatically cycles through the various sound channels, we suggest that you listen to the TV sound for a few moments before adjusting any of the channels. By doing this you may be able to determine which channels need adjusting. Once you have adjusted the selected level, leave the TV to cycle through the Surround Setup menu a few times more, this will then allow you to determine whether you have applied the correct amount of volume level to the selected sound channel.

1

Press and hold the MENU button for 5 seconds. The INSTALL option in the MAIN MENU appears.



2

Press the cursor down button to select INSTALL.



3

Once highlighted, accept selection.



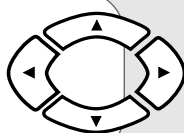
4

Press the cursor down button to select SURROUND SETUP.



5

Use the cursor keys to move the selection bar over the channel required to be adjusted. The effect of these adjustments can be seen in the accompanying on-screen display.



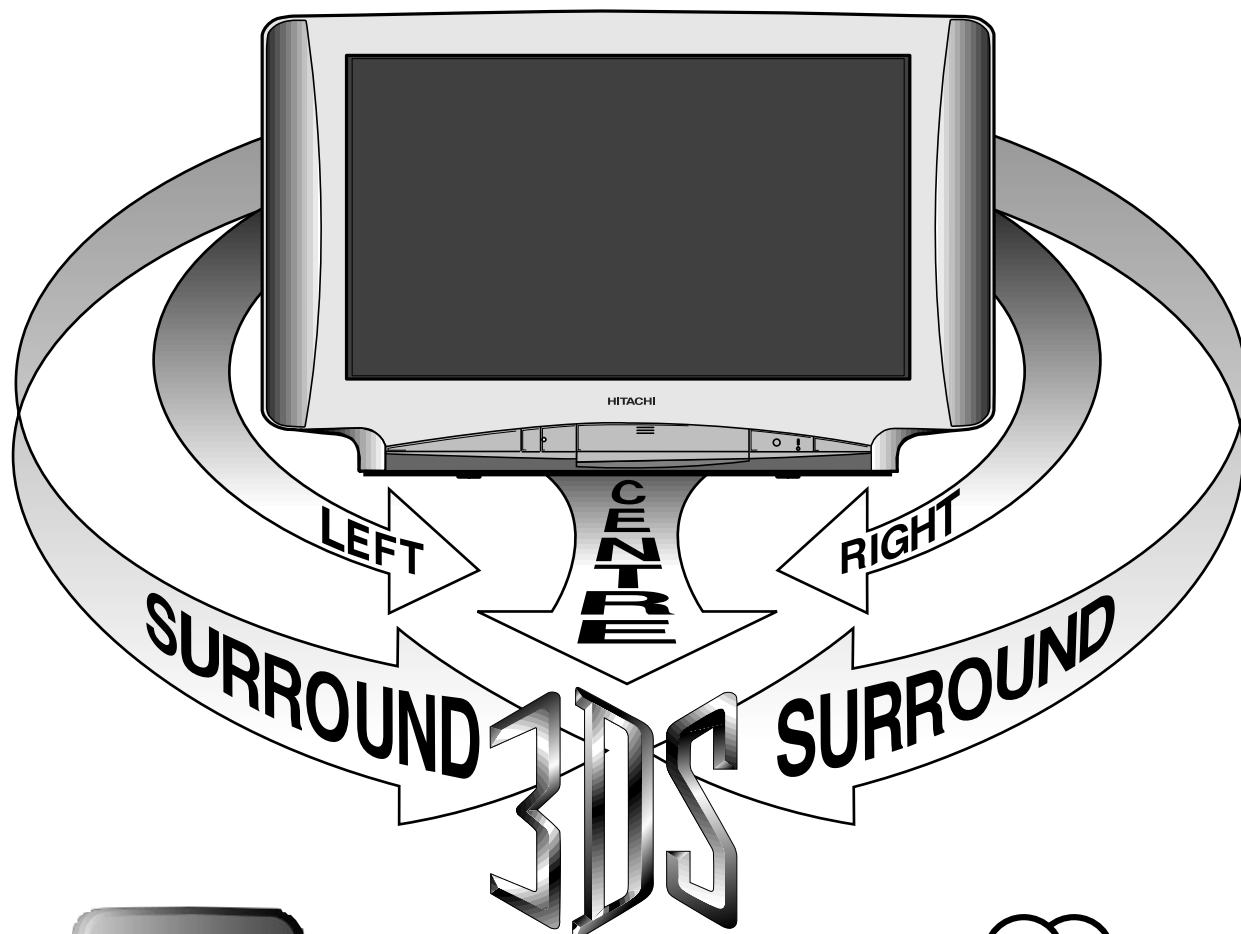
...notes on seating position

The seating position control accommodates the position of the speakers with regard to your seating position, and so further creates an atmosphere where improved sound qualities are obtained from your TV.

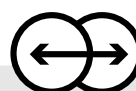
- If you are seated near the front speakers, adjust the seating position to FRONT.
- If you are seated between the front and rear speakers, adjust the seating position to MID.
- If you are seated at a position close to the rear speakers, adjust the seating position to REAR.

...notes on internal speaker option

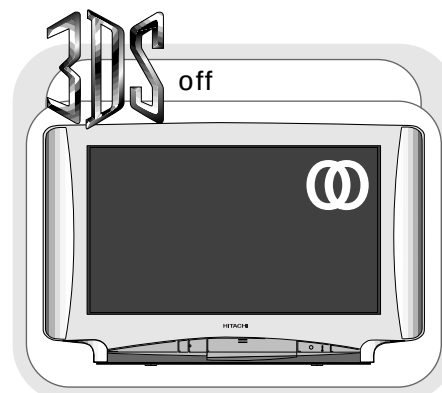
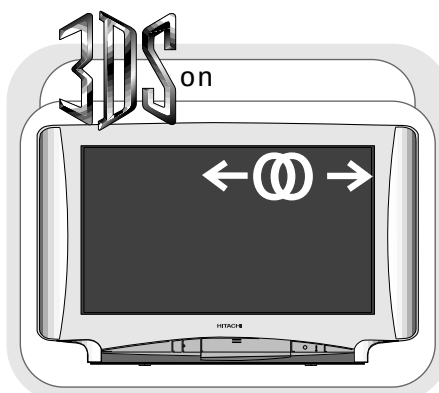
Through innovative design and complex internal circuitry, HITACHI have produced this television which recreates superb Dolby Pro Logic cinematic sound. However, to enhance your viewing pleasure when using only the TV's own internal speakers, we have created the 3DS system (3 Dimensional Spatial Sound). The 3DS system gives a much wider spread of sound from the TV giving the impression of sound coming from the sides of the room rather than the TV's internal speakers, whilst the important centre dialogue channel is unaltered, still appearing to come from the centre of the screen.



3DS/Stereo sound button



Use this button on your handset to activate the 3DS sound spatializer, and another press to deactivate the sound system - when activated a  symbol appears in the top right hand corner of the screen indicating that 3DS is on (see below) - when deactivated the  symbol is displayed on the screen indicating that stereo sound capabilities are in operation - see next page.



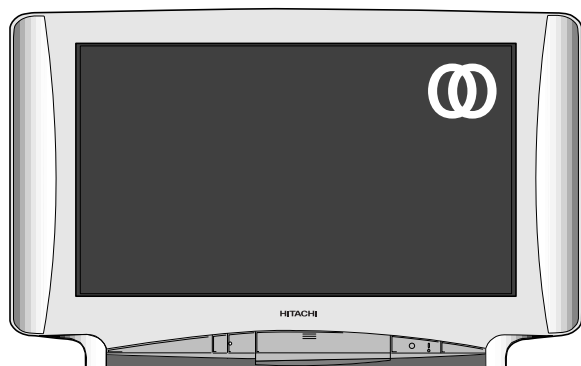
...notes on nicam features

Nicam is a method for transmitting and receiving stereo sound. If your TV is unable to receive Nicam because of the wrong geography, climate etc., or when Nicam is not transmitted in your location it will produce a monaural sound source.

stereo

This effect produces nicam digital stereo sound from your TV. Use this mode for the majority of TV viewing. When selected the stereo symbol appears.

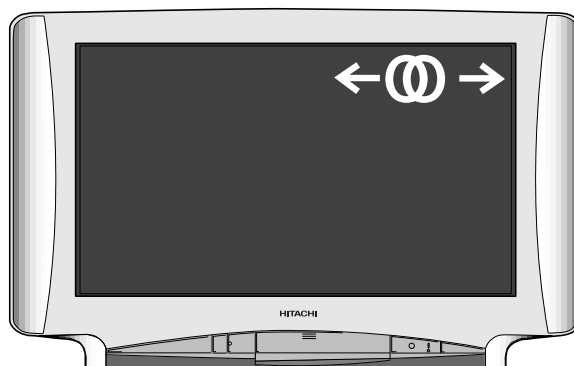
Use the  button on your handset to switch to stereo.



wide stereo

This effect enhances nicam digital stereo by forcing a wide area of sound from the TV. Use this mode when viewing action movies or sports events to obtain spatialising acoustic performance.

Use the  button on your handset to switch to wide stereo. If you are in Dolby Pro Logic Mode, this button will activate the Hitachi 3DS sound system.



monaural

In this mode the TV produces a single sound source. The TV will automatically select this sound when a mono signal is found. Some stereo signals can be poor in adverse weather conditions, and mono should be selected to avoid poor sound.

Use the  button on your handset to switch to mono.

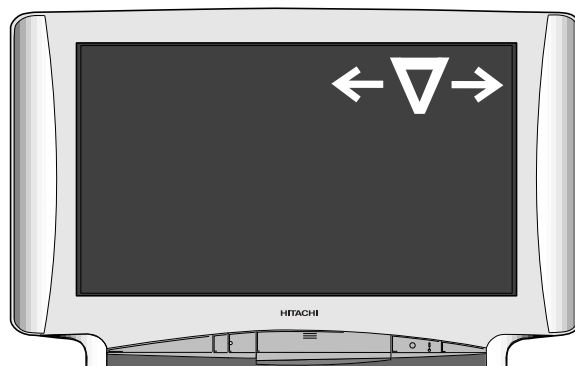


pseudo stereo

This creates an ambient sound from mono signals imitating that of stereo sound.

Use the  button on your handset to switch to pseudo stereo sound.

Note: Pseudo Stereo is only available in monaural transmissions.



1

Press and hold the MENU button for 5 seconds. The INSTALL option in the MAIN MENU appears.



2

Press the cursor down button to select INSTALL



3

Once highlighted, accept selection.



4

Press the cursor down button to select SPEAKER SETUP.



5

Once highlighted, accept selection.



6

Press the up/down buttons  to make your selection and adjust using the left/right cursor keys. 



...notes on speaker setup

The Speaker Setup allows you to choose various centre speaker modes. This is particularly useful if an external amplifier is connected to the Centre phono socket. In addition to these options, you may want to replace your TV's internal speaker sound to a full external amplified speaker setup. In this case the you can mute the TV's speakers by turning the INTERNAL TV SPEAKERS 'OFF', allowing sound only to be heard through the external amplified sound sources.

phantom: option 1

If you do not have any external amplifiers connected to the TV then select the phantom mode permanently. Phantom allows your TV to create centre dialogue information using the TV's left and right internal speakers.

phantom: option 2

If there are external surround amplifiers connected but no centre amplifiers connected, then select phantom mode. This again allows your TV to create centre dialogue information using the left and right internal speakers.

normal

If you have a limited bass response centre amplifier connected to your TV then select the normal mode. This mode will anchor dialogue to your centre amplifier whilst relaying bass response through your TV's internal right and left speakers.

wide

If you have a good bass response centre amplifier connected to your TV then the mode which best suits your needs is the wide mode. In this mode all bass response and dialogue is fed to the centre amplifier.

7

To return to normal TV operation press the television button on your handset.





important note

It is very important that the AV menu setup is adjusted correctly when connecting external equipment to your TV - the incorrect setting may lead to picture breaking and splitting. It must also be noted that when this external equipment is a VCR or camcorder (VCR mode 'ON') Progressive Scan is not an option during playback and your TV automatically displays the picture at 100Hz.

...notes on using VCR's and camcorders through AV input

The AV Input screen is used as a means of instructing your television to recognise what external equipment is being connected to your TV's scart, S-VHS and/or phono sockets. If you have any equipment connected to your TV (either permanently, like a VCR, or temporary, like a camcorder) it is important your TV recognises which kind of equipment is connected and so you must switch the relevant AV to ON for all VCR's and camcorders (in the case of having S-VHS or Hi8 equipment, AV1 SAV MODE must be set to the appropriate setting - it is recommended that this setting is AUTO). For example, your VCR should be connected to AV1, therefore AV1 mode should be set to ON.

1

Press and hold the MENU button for 5 seconds. The INSTALL option in the MAIN MENU appears.



2

Press the cursor down button to select INSTALL.



3

Once highlighted, accept selection.



4

Press the cursor down button to select AV SETUP.



5

Once highlighted, accept selection.



6

Use the up/down cursor keys to select AV to adjust.



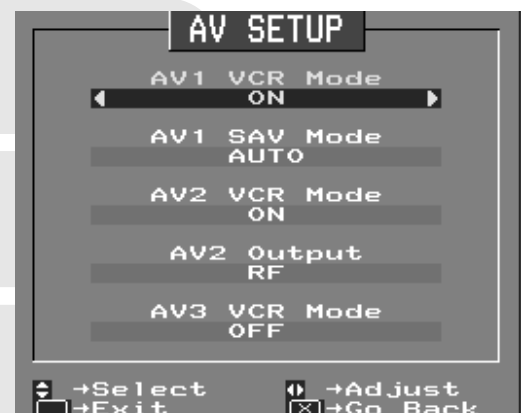
7

Adjust chosen AV by using the left/right cursor buttons.

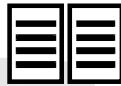


8

Once highlighted, accept selection.



dual page



When in Teletext mode, press once to display the current page and the next in the magazine, press again to view current page and TV picture.

The handset controls shown here are used when you are operating Teletext.

hold



Use this to 'freeze' the teletext page on display to prevent the page changing (press again to continue).

swap



In Teletext mode views the previous five entered magazine pages. (in TV mode returns from your current viewing channel to the previous one).

colours

(red, green, yellow, blue)
On certain pages in teletext, these will have coded instructions i.e. a shortcut to a teletext page or title.

index



When entering a page manually, this will take you to the index - when in Fastext mode this will take you to the first page of the magazine in view.

television

Press this button to return to normal TV operations when in the teletext mode.

reveal



Used in Teletext mode to show hidden information eg. quiz pages answers.

teletext

Press this button to use the Teletext services.

update



Restores TV picture whilst the TV is looking for the entered Teletext page.

expand



Use this button to expand the size of the teletext page on view.

subtitles



Use this to access a subtitle service directly rather than through a teletext service (subject to subtitle service broadcasting).

For other handset controls see
handset controls - program tuning on page 11
handset controls - television operation on page 34



...notes on Teletext

Teletext is an on screen information magazine and it is entered by pressing the teletext button  on your handset - a page similar to the one below will appear.

Select the topic you want to view by entering a three digit number on your handset corresponding to the page number eg. press 1,0,1 for the News Headlines.

Alternately, press a coloured button which relates to one of the topics at the bottom of the screen(the Fastext service) eg. press the green button on your handset for the sport magazine.

	magazine name	date	time																																																								
magazine page number	P100 CEEFAX 2 100 Wed 19 Mar 15:49/06																																																										
magazine title	BBC CEEFAX																																																										
	CEEFAX AT-A-GLANCE PRESS HOLD																																																										
page contents	<table><tr><td>NEWS HEADLINES</td><td>101</td><td>LOTTERY</td><td>555</td></tr><tr><td>NEWS INDEX</td><td>102</td><td>BACKBEAT</td><td>560</td></tr><tr><td>ELECTION 97</td><td>120</td><td>FREETIME</td><td>570</td></tr><tr><td>NEWS EXTRA</td><td>140</td><td>GARDENING</td><td>573</td></tr><tr><td>CITY BBC2</td><td>200</td><td>COOKBOOK</td><td>580</td></tr><tr><td>SPORT</td><td>300</td><td>ON THE BOX</td><td>590</td></tr><tr><td>WEATHER</td><td>400</td><td>TV GUIDE</td><td>600</td></tr><tr><td>TRAVEL</td><td>430</td><td>TV LINKS</td><td>615</td></tr><tr><td colspan="4"></td></tr><tr><td>CBBC INDEX</td><td>500</td><td>RADIO BBC1</td><td>640</td></tr><tr><td>SUB ZERO</td><td>501</td><td>EDUCATION BBC2</td><td>630</td></tr><tr><td>NEWSROUND</td><td>510</td><td>READ HEAR BBC2</td><td>640</td></tr><tr><td>SHOWTIME</td><td>520</td><td>COMMUNITY BBC2</td><td>650</td></tr><tr><td>SWITCHED ON</td><td>540</td><td>RACING</td><td>660</td></tr></table>			NEWS HEADLINES	101	LOTTERY	555	NEWS INDEX	102	BACKBEAT	560	ELECTION 97	120	FREETIME	570	NEWS EXTRA	140	GARDENING	573	CITY BBC2	200	COOKBOOK	580	SPORT	300	ON THE BOX	590	WEATHER	400	TV GUIDE	600	TRAVEL	430	TV LINKS	615					CBBC INDEX	500	RADIO BBC1	640	SUB ZERO	501	EDUCATION BBC2	630	NEWSROUND	510	READ HEAR BBC2	640	SHOWTIME	520	COMMUNITY BBC2	650	SWITCHED ON	540	RACING	660
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SWITCHED ON	540	RACING	660																																																								
Fastext/favourite pages	<table><tr><td colspan="4">NEWS EXTRA..NEWS EXTRA..NEWS EXTRA >>>>></td></tr><tr><td>Home 141</td><td>World 142</td><td>Politics 143</td><td></td></tr><tr><td>News Heads</td><td>Sport</td><td>TV/Radio</td><td>Weather</td></tr></table>			NEWS EXTRA..NEWS EXTRA..NEWS EXTRA >>>>>				Home 141	World 142	Politics 143		News Heads	Sport	TV/Radio	Weather																																												
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Home 141	World 142	Politics 143																																																									
News Heads	Sport	TV/Radio	Weather																																																								

...notes on favourite pages

Your TV is capable of storing up to four of your favourite Teletext pages - maybe the sports page, cookery page or gardening page - the choice is yours. These are accessed, like Fastext, by pressing the colour coded buttons on your handset. Follow the steps below to enter your favourite pages.

1 Enter Teletext by pressing the Teletext button. 

2 Enter favourite page mode by pressing the menu button (this allows you to swap between Fastext and favourite page mode). 

3 Press a colour coded key you wish to use as a favourite page. 

4 Enter the 3-digit page number using the buttons. 

5 Once this number has been entered, press and hold the same colour coded button until the favourite page box turns white, then returns to its original colour. 

6 Repeat if necessary using a different coloured key, or press the menu button to return to normal viewing. 

P100	CEEFAX 2	100	Wed 19 Mar 15:49/06
			
CEEFAX AT-A-GLANCE PRESS HOLD			
NEWS HEADLINES	101	LOTTERY	555
NEWS INDEX	102	BACKBEAT	560
ELECTION	97	FREETIME	570
NEWS EXTRA	140	GARDENING	573
CITY	BBC2 200	COOKBOOK	580
SPORT	300	ON THE BOX	590
WEATHER	400	TV GUIDE	600
TRAVEL	430	TV LINKS	615
CBBC INDEX	500	RADIO	BBC1 640
SUB ZERO	501	EDUCATION	BBC2 630
NEWSROUND	510	READ HEAR	BBC2 640
SHOWTIME	520	COMMUNITY	BBC2 650
SWITCHED ON	540	RACING	660
NEWS EXTRA..NEWS EXTRA..NEWS EXTRA >>>>>			
Home 141 World 142 Politics 143			
L	XXX	XXX	XXX

favourite page box

...notes on teletext dual page feature

At Hitachi we are committed to the constant development of our televisions capabilities. One of the features developed for the benefit of you, the customer, is the expansion of the Teletext service from a one page screen display to a feature that can be manipulated in a number of ways.

The instructions below show how to take advantage of this excellent feature whatever your viewing environment or demands.

option 1

standard teletext

Standard teletext can be entered by pressing the teletext button on your handset - see page 33 for details - and this screen must be entered before any of the dual page options can be used.

P100 CEEFAK 2 100 Wed 19 Mar 15:49/06

BBC CEEFAK

CEEFAK AT-A-GLANCE PRESS HOLD

NEWS HEADLINES 101	LOTTERY 555
NEWS INDEX 102	BACKBEAT 560
ELECTION 97	FREETIME 570
NEWS EXTRA 140	GARDENING 573
CITY BBC2 200	COOKBOOK 580
SPORT 300	ON THE BOX 590
WEATHER 400	TV GUIDE 600
TRAVEL 430	TV LINKS 615
CBBC INDEX 500	RADIO BBC1 640
SUB ZERO 501	EDUCATION BBC2 630
NEWSROUND 510	READ HEAR BBC2 640
SHOWTIME 520	COMMUNITY BBC2 650
SWITCHED ON 540	RACING 660

NEWS EXTRA...NEWS EXTRA...NEWS EXTRA
Home 141 World 142 Politics 143

News Heads Sport TV/Radio Weather

option 2

single teletext page operation

This option splits the viewable screen area in half so that two teletext pages can be viewed at the together - although only one page can be changed at a time. This is achieved by pressing the 16:9 button on your handset once. Pressing the OK button on your handset places the

right hand screen on the left side and 'freezes' the page.

When a new page number is entered, the right hand side will change while the left will remain the same. Pressing the 'X' button on your handset will erase the left hand page.

P100 CEEFAK 2 100 Wed 19 Mar 15:49/06

BBC CEEFAK

CEEFAK AT-A-GLANCE PRESS HOLD

NEWS HEADLINES 101	LOTTERY 555
NEWS INDEX 102	BACKBEAT 560
ELECTION 97	FREETIME 570
NEWS EXTRA 140	GARDENING 573
CITY BBC2 200	COOKBOOK 580
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NEWSROUND 510	READ HEAR BBC2 640
SHOWTIME 520	COMMUNITY BBC2 650
SWITCHED ON 540	RACING 660

NEWS EXTRA...NEWS EXTRA...NEWS EXTRA
Home 141 World 142 Politics 143

News Heads Sport TV/Radio Weather

P300 CEEFAK 2 100 Wed 19 Mar 15:49/06

BBC CEEFAK

CEEFAK AT-A-GLANCE PRESS HOLD

HEADLINES 300	SUMMARY 372
RESULTS 303	FISHING 373
FOOTBALL 310	BOWLING 374
SWIMMING 320	
DARTS 330	
RUGBY 340	
HOCKEY 350	
TENNIS 355	
RACING 361	BASEBALL 365
AMTREE 362	BASKETBALL 366
ASCOT 363	YACHTING 367
HAYDOCK 364	
WIN CUP FINAL TICKETS TO WEMBLEY	

NEWS EXTRA...NEWS EXTRA...NEWS EXTRA
Home 141 World 142 Politics 143

News Heads Sport TV/Radio Weather

option 3

teletext page and TV viewing

An advance on the previous 'mixing' facility where a transparent page overlaps the program on view, this option splits the screen in half. Press the 16:9 button twice on your handset (from option 1) to use this feature. This option has the same function as the standard teletext page (see option 1) but with the capacity to also view the program being watched before Teletext was entered.



P100 CEEFAK 2 100 Wed 19 Mar 15:49/06

BBC CEEFAK

CEEFAK AT-A-GLANCE PRESS HOLD

NEWS HEADLINES 101	LOTTERY 555
NEWS INDEX 102	BACKBEAT 560
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CITY BBC2 200	COOKBOOK 580
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SWITCHED ON 540	RACING 660

NEWS EXTRA...NEWS EXTRA...NEWS EXTRA
Home 141 World 142 Politics 143

News Heads Sport TV/Radio Weather

To return to normal TV operation press the television button on your handset.



The handset controls shown here are used when your TV is in normal operation.

AV setup

Used to select a signal source for external equipment (see pages 25, 26 and 31)

standby

Used to switch your TV in and out of standby mode (see page 8 for details).

programme controls

Used to change channels either up '+' or down '-'

freeze frame

This button allows you to 'freeze' the picture being viewed on your television.

time

Use this button to display the current time on screen.

16:9 button

This button allows you to switch between the various wide screen features of your TV (see page 21).

sound mute

This button allows you to switch the TV's sound on and off.

CH frequency

This allows you to directly input known broadcasting CH or frequency numbers.

volume controls

Used to increase '+' or decrease '-' your TV's volume.

Progressive Scan

Use this button to change the scanning mode of your TV - from 100Hz to Progressive scan (see page 15).

recall

Press this button to view the current TV status.

For other handset controls see
handset controls - program tuning on page 11
handset controls - teletext operation on page 32

questions

Why won't my TV switch on?

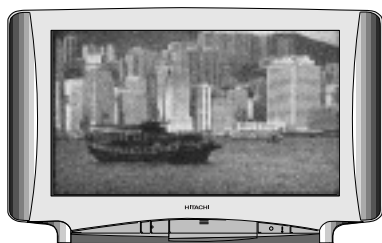
Why doesn't my remote control handset work?

answers

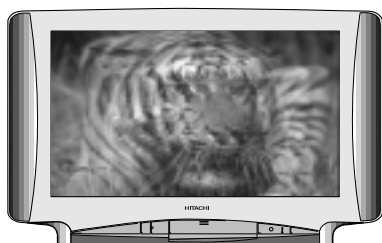
Check that your plug is connected to the socket and switched on, check fuse and make sure TV is not in standby mode (see below)

Make sure there are no obstructions between the handset and the TV's infra-red lens, or the batteries may be exhausted - replace the whole set of batteries.

problem identification



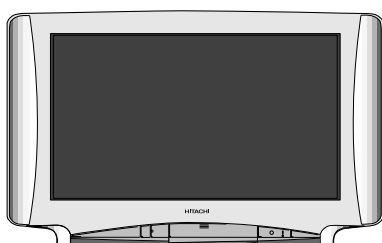
snowy picture - poor sound



multiple images - sound O.K



intermittent interference



no picture or sound

possible reason

Connection of aerial lead to the TV is poor.

Corroded or poor aerial connections.

Aerial has moved position.

Adverse weather conditions.

Transmitter problems.

Aerial has moved position.

TV not tuned correctly.

Adverse weather conditions.

Transmitter problems.

AV Input not set correctly.

Magnetic interference from electrical or mechanical motors, fluorescent lights, portable radios etc.

TV may be in AV mode.

Picture/sound controls set to minimum.

TV in standby mode.

remedy

Make new connection and/or change aerial plug.

Make new connections or renew lead.

Re-align aerial.

None.

Check with local Operator.

Re-align aerial.

Re-tune or fine tune TV.

None.

Check with local Operator.

Check what external equipment is connected and check its scart AV status (see page 31).

Check devices for shielding and renew if necessary or move further from TV.

Press television button  or  to  buttons on your handset to return to normal TV mode.

Check picture/sound controls (go to MAIN MENU).

press one of the buttons  to .

If a problem still continues after referring to this guide contact your dealer immediately.

Under NO circumstances remove the rear cover of your TV.

Guarantee

Thank You for purchasing this Hitachi Television.

In the unlikely event that this product should develop a fault, we undertake to repair or replace any part of the product which fails due to a manufacturing defect within 12 months of the date of purchase provided that...

1. the product has been installed and used only in accordance with the instructions supplied with the product.
 2. the product has not been repaired, maintained, or modified by any person other than a Hitachi authorised dealer.
 3. the product serial number has not been removed or altered.
- this guarantee does not apply to a product acquired second hand or for commercial or communal use.
 - this guarantee does not cover the replacement of exhausted batteries, the adjustment of user controls, or aerial alignment.
 - any parts replaced under this guarantee shall become the property of Hitachi Home Electronics (Europe) Ltd,
 - please note that evidence of the date of purchase will be required before any service under this guarantee is carried out

Use the boxes provided below to record your TV's Model and Serial Number - these are found on the rating plate located on the rear of the TV. Also, record where and when you purchased this T.V. This information will help any future queries you may have and should be used in all correspondence with Hitachi service centres.

MODEL

SERIAL NUMBER

DEALER/STORE

DATE PURCHASED

This guarantee does not affect your statutory rights.

*In all cases of difficulty please
consult your Hitachi dealer.*

HITACHI

Environmental Notice

Hitachi are signatories to the commitment made by the consumer electronics industry on reducing energy consumption by televisions and video recorders on standby.

Even though your TV has a low power consumption, you can reduce waste to zero if you switch off the set at the mains after use. Your TV should certainly be switched off overnight or when you are away from home. Other factors should also be considered when operating your TV. Reducing volume settings to sensible levels can reduce power consumption as well as reducing noise pollution, and reducing contrast can provide a more pleasing picture as well as reducing power consumption.

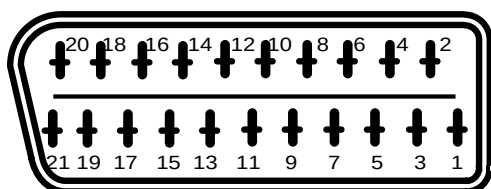
Hitachi Home Electronics (Europe) Ltd. manufacturing site in Wales is a BSI Registered Company, and has been assessed to ISO 9001 Quality Management Standard, certificate FM32366. Your television has been manufactured under the Environmental Quality Management Standard ISO14001, certificate EMS 36168.

The paper used for this Users Guide has been produced from sustainable forests, part of Hitachi's on going commitment to the global environment.

television specification

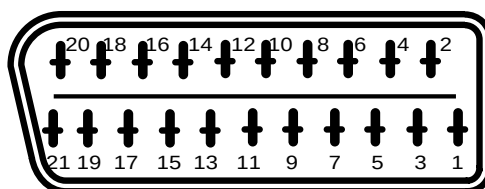
TV Standard	100Hz
Progressive Scan	50Hz
Aerial Impedance	75Ω unbalanced
Picture Tube	C28W35 = 66cm type C32W35 = 76cm type
Mains Voltage	220 - 240V AC 50 Hz
Internal Speakers	6 x 12cm type x 2
Power Consumption	C28W35TN = 120W (approx) C32W35TN = 126W (approx) Standby <6W (all models)
Weight	66cm = 33.50kg (NET) 76cm = 46.00kg (NET)
Dimensions (W x D x H)	66cm = 782 x 515 x 495 (mm) 76cm = 879 x 569 x 554 (mm)
Remote Control Batteries	2 X HITACHI UM-4 (equivalent 'AAA')

scart socket AV1



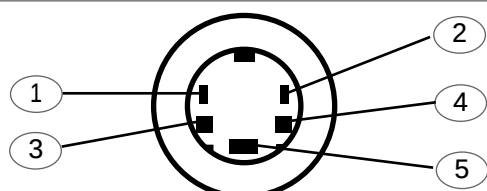
1	AUDIO OUT (RIGHT)
2	AUDIO INPUT (RIGHT)
3	AUDIO OUT (LEFT)
4	GROUND (AUDIO)
5	NOT USED
6	AUDIO INPUT (LEFT)
7	NOT USED
8	SWITCHING INPUT
9	NOT USED
10	NOT USED
11	NOT USED
12	NOT USED
13	CHROMINANCE GROUND
14	NOT USED
15	CHROMINANCE INPUT S-VHS
16	NOT USED
17	GROUND (VIDEO)
18	GROUND (VIDEO)
19	COMPOSITE VIDEO OUTPUT
20	COMPOSITE VIDEO OR
21	COMPOSITE LUMINANCE S-VHS GROUND

scart socket AV2



1	AUDIO OUT (RIGHT)
2	AUDIO INPUT (RIGHT)
3	AUDIO OUT (LEFT)
4	GROUND (AUDIO)
5	GROUND (BLUE)
6	AUDIO INPUT (LEFT)
7	BLUE INPUT
8	SWITCHING INPUT
9	GROUND (GREEN)
10	NOT USED
11	GREEN INPUT
12	NOT USED
13	GROUND (RED)
14	GROUND (BLANKING)
15	RED INPUT
16	STATUS (BLANKING) INPUT
17	GROUND (VIDEO)
18	GROUND (VIDEO)
19	COMPOSITE VIDEO OUTPUT
20	COMPOSITE VIDEO INPUT
21	GROUND

S-VHS socket



PIN	FUNCTION
1	Chrominance input
2	Luminance input
3	Chrominance ground
4	Luminance ground
5	Frame ground

HITACHI

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